United States
Environmental Protection
Agency

Region 5
Office of Public Affairs
230 South Dearborn Street
Chicago, Illinois 60604

Illinois, Indiana,
Michigan, Minnesota,
Ohio, Wisconsin

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FACT SHEET

POLYCHLORINATED BIPHENYLS (PCB's)
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WHAT ARE PCB'S?

Polychlorinated biphenyls (PCB's) are part of a broad family of organic chemicals known as chlorinated hydrocarbons. PCB's were first introduced into commercial use 45 years ago and are of concern today because of their wide dispersal and persistence in the environment, and their tendency to accumulate in the higher levels of the food chain, including man.

PCB's range in consistency from heavy oily liquids, weighing 10-12 pounds per gallon, to waxy solids. These synthetic chemicals have a high boiling point, a high degree of chemical stability, low solubility in water, high solubility in fat, low flammability, and low electrical conductivity--ideal properties for many commercial uses. PCB's were and continue to be used primarily as cooling liquids in electrical transformers and capacitors. Most of the PCB's marketed in the United States are still in service in those types of products. PCB's have also been used as heat transfer and hydraulic fluids; as dye carriers in carbonless copy paper; in paints, adhesives, and caulking compounds; and as sealants and road coverings to control dust.

Most of these uses have, or are being phased out as a result of the 1979 ban on PCB manufacturing, processing, distribution, and use. Even though PCB's are restricted or strictly regulated, the compounds are still found in old transformers, capacitors, and other products.

HEALTH CONCERNS

Among the most stable chemicals known, PCB's decompose very slowly over a period of several decades. Once released, PCB's remain in the environment and are taken up and are stored in the fatty tissue of all organisms. The concentration of PCB's in fatty tissue increases with time even though the exposure levels to PCB's are very low. In technical language, this process is called bioaccumulation. Another problem is biomagnification--PCB build-up in the food chain. As living organisms containing PCB's are eaten by other organisms, the amount consumed by each higher organism increases. The concentrations consumed by humans at the end of the food chain, can thus be significant.

Documented tests show that exposure to high levels of PCB's can cause gastric disorders, skin lesions, and liver cancer in laboratory animals. On this basis, it is a listed probable human carcinogen. Persons having a high risk of exposure are PCB workers and those eating large amounts of fish, especially those caught from the Great Lakes. The general population is not subject to any significant increase in health risk due to exposure to background levels of PCB's in the environment.